

Supplementary Table S1 Summary of motifs reported in RNAi Proteins.

Domain Name (PFAM#)	L. major	L. infantum	L. braziliensis	T. brucei	Protein Name
PAZ (PF02170)	- (pseudogene) LmjF11.0570	- (pseudogene) LinJ11.0500	+ (1) LbrM11_V2.0360*	+ (1) Tb10.406.0020 *	AGO1
PIWI (PF02171)	+ (1) LmjF21.0410	+ (1) LinJ21.0310	+ (1) LbrM21_V2.0470	+ (1) Tb10.70.5520	PiwiS
PAZ + PIWI	- (pseudogene) LmjF11.0570	- (pseudogene) LinJ11.0500	+ (1) LbrM11_V2.0360	+ (1) Tb10.406.0020 *	AGO1
RNase III (PF00636)	+ (2) LmjF36.0920 LmjF36.1050 LmjF20.0900	+ (2) LinJ36.1710 LinJ36.1580 LinJ36.0920	+ (4) LbrM35_V2.1040 LbrM35_V2.1180 LbrM20_V2.5080 LbrM25_V2.1020* LbrM23_V2.0390*	+ (5) Tb10.70.1750 Tb11.01.0150 Tb927.1.1690 Tb03.1J15.690 * Tb08.26A17.170 *	MP67 MP61 MP90
DSRBD (PF00035)	+ (2) LmjF34.1190 LmjF34.3230	+ (2) LinJ34.1130 LinJ34.2750	+ (2) LbrM20_V2.1240 LbrM20_V2.2810	+ (3) Tb04.2H8.840 Tb04.2L9.750 Tb08.5H5.450	
DEAD/H box RNA helicase (PF00270)	+ (46)	+ (54)	+ (45)	+ (>35)	
DSRBD + DEAD/H box RNA helicase	+ (2) LmjF34.1190 LmjF34.3230	+ (2) LinJ34.1130 LinJ34.2750	+ (2) LbrM20_V2.1240 LbrM20_V2.2810	+ (2) Tb04.2L9.750 Tb04.2H8.840	
TUDOR (PF00567)	+ (1) LmjF32.0950	+ (1) LinJ32.1350	+ (1) LbrM32_V2.1040	+ (1) Tb11.01.5780	
SNase (PF00565)	+ (2) LmjF32.0950 LmjF06.1080	+ (2) LinJ32.1350 LinJ06.1120	+ (2) LbrM32_V2.1040 LbrM06_V2.1060	+ (2) Tb11.01.5780 Tb07.27M11.880	

*Indicates proteins that are restricted to *L. braziliensis* and *T. brucei*. Although *L. major* and *L. infantum* have an orthologue to the AGO1 gene they are clearly pseudogenes.

All the *Leishmania* proteins are syntenic between species, in most other cases they are also syntenic with the orthologues in *T. brucei*, those genes that are not syntenic with the orthologue in *T. brucei* are shown in red.

The genes that are predicted to be involved in the RNAi pathway can be identified by identifying putative domains known to be required for this process. While all the kinetoplastids sequenced to date have many of the components needed, only African Trypanosomes and *L. braziliensis* appear to have the full complement. RNAi has been experimentally demonstrated in *T. brucei*.